

REMARKS

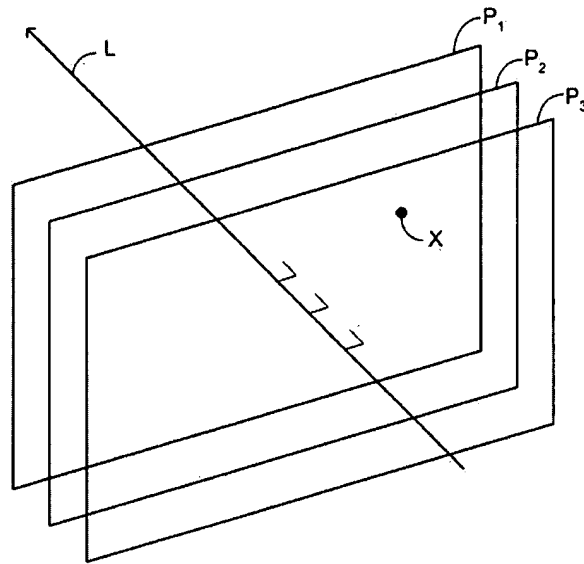
Claims 1 – 3, 5 – 10, 12 – 21, and 23 – 27 have been examined and stand rejected under 35 U.S.C. §102(e) as anticipated by U.S. Pat. No. 6,097,859 (“Solgaard”).

1. Interview Summary

The undersigned thanks the Examiner for his courtesy in discussing the application by telephone on July 9, 2004. During that conversation, the Examiner maintained the view that the following limitation previously included in Claim 1 is disclosed in Solgaard: “at least two of the output ports lie in different parallel planes, each such plane being orthogonal to a path along which the optical signal may be received by one of the output ports.” Applicants offer a more detailed explanation below why this limitation, and similar limitations recited in the claims, is not disclosed in Solgaard. In addition, the Examiner drew the undersigned’s attention to U.S. Pat. No. 6,453,083 (“Husain”), which is not of record in the application. An Information Disclosure Statement citing Husain is accordingly submitted concurrently herewith.

2. Solgaard

The claims precisely recite the staggered nature of input and/or output ports by using the Euclidean property that a plane may be defined uniquely by specification of a path that is orthogonal to the plane and a point that lies within the plane (*see* Exhibit A). The following drawing illustrates that infinitely many planes P may be orthogonal to a given path L :



All the planes that are orthogonal to L are necessarily parallel to each other because any rotation of a plane about an axis other than L would result in a non-normal inclination of the plane to L . A particular one of the planes may be uniquely defined by the additional specification of any point within that plane. For example if point X lies in plane P_2 , then the plane P_2 is uniquely defined by identifying path L and point X . No other plane can simultaneously include X and be orthogonal to L .

Fig. 1 of Solgaard shows three input fibers 14, all of which provide light along paths that are directed upwards and within the page. In addition, Fig. 1 of Solgaard shows three output fibers 24, all of which receive light downwards and within the page. The respective input and output ports are located at ends of the fibers. Because all of the (input and output) paths are parallel or antiparallel, the infinite set of planes defined by any one of the paths is identical — it corresponds to the set of planes that are orthogonal to the page and oriented to intersect the page along a line that extends straight across the width of the page. Since Solgaard shows all of the input and output ports to lie on such a line, the additional specification of one of these planes as including any one of the input or output ports defines the same unique plane: the plane that is orthogonal to the page and oriented to intersect the page along the line that extends straight across the width of the page and passing through all of the input and output ports. The fact that Solgaard fails to disclose staggered ports is embodied in the fact that it is impossible to identify

two distinct planes that are orthogonal to any of the input or output paths to or from the fibers, and include one of the input or output ports. It is respectfully believed that no *prima facie* case under §102 can be made over Solgaard with respect to any of the claims without such an identification.

3. Claims 1 – 3 and 5 – 7

Claim 1 has been amended and recites that “at least two of the output ports lie in different parallel planes, each such plane being orthogonal to the input path.” For the reasons discussed above, such a limitation is neither taught nor suggested by Solgaard. Applicants additionally note that the claim does not read on Husain, and is therefore believed to be patentable.

4. Claims 8 – 10, 12, and 13

Claim 8 has been amended to claim a method for directing light having a plurality of spectral bands. It recites that “at least two of the output ports lie in different parallel planes, each such plane being orthogonal to a path along which one of the spectral bands is received by one of the output ports.” For the reasons discussed above, such a limitation is neither taught nor suggested by Solgaard. The claim additionally recites “angularly separating the spectral bands with a dispersive element.” Applicants note that such a limitation is neither taught nor suggested by Husain, which is not concerned at all with routing different spectral bands of light differently. Amendments have been made to Claims 9, 12, and 13 for consistency with the amendments to Claim 8, which is thus believed to be patentable.

5. Claims 15 – 21, 23, and 24

Claim 15 recites that “at least two of the output ports lie in different parallel planes, each such plane being orthogonal to a path along which one of the directed spectral bands may be received by one of the output ports. For the reasons discussed above, such a limitation is neither taught nor suggested by Solgaard. The claim additionally recites “a free-space optical train ... including a dispersive element disposed to intercept light traveling from the input port.” Applicants note that such a limitation is neither taught nor suggested by Husain, which is not concerned at all with routing different spectral bands of light differently. It is accordingly believed that Claim 15 and the claims that depend therefrom are patentable.

6. Claims 25 – 27

Claim 25 has been amended and recites that “the output ports lie in a common plane orthogonal to the input path and the input port lies outside the common plane.” For the reasons discussed above, such a limitation is neither taught nor suggested by Solgaard. Applicants additionally note that the claim does not read on Husain, and is therefore believed to be patentable.

CONCLUSION

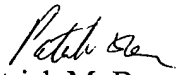
In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

Appl. No. 09/747,064
Amdt. dated July 28, 2004
Reply to Office Action of April 1, 2004

PATENT

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 303-571-4000.

Respectfully submitted,


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